

AMENDMENTS TO THE CLAIMS:

Claims 1-10 (cancelled)

11. (New) A method of recycling aqueous paint, comprising:
in a recycling system having

- (i) a coating booth,
- (ii) a booth circulation water bath,
- (iii) a condensation bath,
- (iv) an ultra-filtration apparatus, and
- (v) a paint tank,

spray-coating an article with aqueous paint in said coating booth;
using a water curtain in said coating booth to collect over-spray paint that does not adhere to said article;
passing said over-spray paint and water of said water curtain into said booth circulation water bath so as to convey a mixture of said over-spray paint and water into said condensation bath;
using said ultra-filtration apparatus to separate said mixture into condensed paint and filtrate;
conveying said condensed paint into said paint tank;
if necessary, removing said condensed paint from said paint tank for adjustment thereof and using this adjusted condensed paint for aqueous paint to coat an article; and
controlling a total amount of liquid within said recycling system to be constant during the spray-coating of said article with said aqueous paint.

12. (New) The method according to claim 11, wherein
controlling a total amount of liquid within said recycling system to be constant during the spray-coating of said article with said aqueous paint comprises controlling to be constant a sum of $V_w + V_x + V_y + V_z$,
with V_w being equal to a volume of water in said booth circulation water bath, V_x being equal to a volume of said filtrate, V_y being equal to a volume of said mixture of said over-spray paint and

water that is within said condensation bath, and V_z being equal to a volume of said condensed paint in said paint tank.

13. (New) The method according to claim 12, further comprising:
adjusting said condensed paint by adding thereto another aqueous paint and a volatile component so as to provide adjusted condensed paint, wherein said adjusted condensed paint is to be used as aqueous paint for spray-coating an article in said coating booth.

14. (New) The method according to claim 12, wherein said recycling system further has a filtrate bath, and further comprising:

storing said filtrate in said filtrate bath;
when spray-coating of an article is not being performed, conveying a necessary amount of said filtrate from said filtrate bath into said coating booth so as to clean an interior of said coating booth;
then

conveying water from said coating booth to said condensation bath; and then
performing a spray-coating operation in said coating booth.

15. (New) The method according to claim 14, wherein
conveying water from said coating booth to said condensation bath comprises, prior to evaporation of water from said booth circulation water bath, supplying water from said booth circulation water bath into said condensation bath in an amount equal to an amount of said filtrate conveyed from said filtrate bath into said coating booth.

16. (New) The method according to claim 12, wherein said recycling system further has a filtrate bath, and further comprising:

when spray-coating of an article is not being performed, conveying a necessary amount of said filtrate from said filtrate bath into said coating booth so as to clean an interior of said coating booth;
then

performing a spray-coating operation in said coating booth; and

supplying water into said condensation bath.

17. (New) The method according to claim 16, wherein supplying water into said condensation bath comprises supplying water into said condensation bath, prior to using said ultra-filtration apparatus to separate a mixture of over-spray paint and water into condensed paint and filtrate, in an amount equal to an amount of liquid lost during performance of the spray-coating operation.

18. (New) The method according to claim 11, wherein said recycling system further has a settling tank and a rinse tank, and further comprising:

storing booth circulation water in said settling tank; and

storing a portion of said filtrate in said rinse tank,

such that controlling a total amount of liquid within said recycling system to be constant during the spray-coating of said article with said aqueous paint comprises controlling to be constant a sum of $V_w + V_x + V_y + V_z + V_s + V_t$,

with V_w being equal to a volume of water in said booth circulation water bath, V_x being equal to a volume of said filtrate not in said rinse tank, V_y being equal to a volume of said mixture of said over-spray paint and water that is within said condensation bath, V_z being equal to a volume of said condensed paint in said paint tank, V_s being equal to said booth circulation water in said settling tank, and V_t being equal to a volume of said portion of said filtrate in said rinse tank.

19. (New) The method according to claim 19, further comprising:

adjusting said condensed paint by adding thereto another aqueous paint and a volatile component so as to provide adjusted condensed paint, wherein said adjusted condensed paint is to be used as aqueous paint for spray-coating an article in said coating booth.

20. (New) The method according to claim 18, wherein said recycling system further has a filtrate bath, and further comprising:

storing said filtrate in said filtrate bath;

when spray-coating of an article is not being performed, conveying a necessary amount of said filtrate from said filtrate bath into said coating booth so as to clean an interior of said coating booth; then

conveying said filtrate from said coating booth to said condensation bath; and then performing a spray-coating operation in said coating booth.

21. (New) The method according to claim 20, wherein conveying water from said coating booth to said condensation bath comprises, prior to evaporation of water from said booth circulation water bath, supplying water from said booth circulation water bath into said condensation bath in an amount equal to an amount of said filtrate conveyed from said filtrate bath into said coating booth.

22. (New) The method according to claim 18, wherein said recycling system further has a filtrate bath, and further comprising:

when spray-coating of an article is not being performed, conveying a necessary amount of said filtrate from said filtrate bath into said coating booth so as to clean an interior of said coating booth; then

performing a spray-coating operation in said coating booth; and supplying water into said condensation bath.

23. (New) The method according to claim 22, wherein supplying water into said condensation bath comprises supplying water into said condensation bath, prior to using said ultra-filtration apparatus to separate a mixture of over-spray paint and water into condensed paint and filtrate, in an amount equal to an amount of liquid lost during performance of the spray-coating operation.

24. (New) The method according to claim 18, further comprising: conveying said portion of said filtrate from said rinse tank into said ultra-filtration apparatus so as to rinse said ultra-filtration apparatus.

25. (New) The method according to claim 11, wherein said recycling system further has a filtrate bath, and further comprising:

storing said filtrate in said filtrate bath;

when spray-coating of an article is not being performed, conveying a necessary amount of said filtrate from said filtrate bath into said coating booth so as to clean an interior of said coating booth; then

conveying water from said coating booth to said condensation bath; and then performing a spray-coating operation in said coating booth.

26. (New) The method according to claim 26, wherein

conveying water from said coating booth to said condensation bath comprises, prior to evaporation of water from said booth circulation water bath, supplying water from said booth circulation water bath into said condensation bath in an amount equal to an amount of said filtrate conveyed from said filtrate bath into said coating booth.

27. (New) The method according to claim 11, wherein said recycling system further has a filtrate bath, and further comprising:

when spray-coating of an article is not being performed, conveying a necessary amount of said filtrate from said filtrate bath into said coating booth so as to clean an interior of said coating booth; then

performing a spray-coating operation in said coating booth; and then supplying water into said condensation bath.

28. (New) The method according to claim 28, wherein

supplying water into said condensation bath comprises supplying water into said condensation bath, prior to using said ultra-filtration apparatus to separate a mixture of over-spray paint and water into condensed paint and filtrate, in an amount equal to an amount of liquid lost during performance of the spray-coating operation.

29. (New) The method according to claim 11, further comprising:

adjusting said condensed paint by adding thereto another aqueous paint and a volatile component so as to provide adjusted condensed paint, wherein said adjusted condensed paint is to be used as aqueous paint for spray-coating an article in said coating booth.

30. (New) The method according to claim 11, wherein

controlling a total amount of liquid within said recycling system to be constant during the spray-coating of said article with said aqueous paint comprises, prior to evaporation of water from said booth circulation water bath, supplying water into said condensation bath in an amount equal to an amount of filtrate conveyed into said coating booth during a time period when spray-coating of said article is not being performed.

31. (New) The method according to claim 11, wherein

controlling a total amount of liquid within said recycling system to be constant during the spray-coating of said article with said aqueous paint comprises supplying water into said condensation bath, prior to using said ultra-filtration apparatus to separate said mixture of over-spray paint and water into condensed paint and filtrate, in an amount equal to an amount of liquid lost during spray-coating of said article.